

In conclusion, I would say that, whatever may be the solution of the question, it is quite possible and even probable that a certain modification of plumage colouring occurs in both *L. algeriensis* and *L. elegans*, which is due solely to local causes, and this modification is perhaps greater in the case of the latter species, owing to its more extended range. I may add that I have examined a large series of Grey Shrikes from all parts of Tunisia, and have also compared the Tunisian birds with specimens from Algeria and Morocco. The Algerian and Tunisian Grey Shrikes appear to be identical. Those from Morocco are also identical so far as the north is concerned—that is to say, *L. algeriensis* is found in the north of Morocco precisely similar to *L. algeriensis* as found in the north of Algeria and Tunisia. Further south in Morocco, however, a somewhat different form occurs; but with regard to this I may have something more to say at a future date.

XXI.—*On the Nests and Eggs of some rare Philippine Birds.*

By W. R. OGILVIE GRANT and JOHN WHITEHEAD.

(Plates V. & VI.)

THE collecting and identification of birds' eggs on the great forest-covered islands of the Equatorial East is by no means so easy as it is in more northern latitudes, where nearly all birds are obliged to nest during the warm season of the year, and, with most species, their young must be sufficiently advanced to enable them to cover the enormous distances of their autumnal migrations. The necessity for a general breeding-season is especially noticeable among the many thousands of birds which retire annually to the circumpolar region in the months of April and May, and return southward, with their full-grown young, about the middle of August or in September.

In tropical countries there is no forced migration or danger to backward young through climatic reasons, and birds' nests containing eggs or young may be met with in

every month of the year; the collector is therefore often doubtful as to the period when certain species will be found incubating. The months selected by most species are those towards the end of the wet season in localities where the seasons are strictly ruled off, as the dry season which follows is often a prolonged drought. In the equatorial regions, where the rainfall is often almost perpetual, birds breed most freely during the driest time of the year. This I noticed on Kina Balu in March and April—the driest months—when numbers of nests were found.

The small number of eggs laid by most species in hot climates is very noticeable. Two eggs, as a rule, complete the sitting, and this occurs in genera the representatives of which in temperate climates lay from five to six eggs to a sitting. Nor do birds appear to nest more frequently in the tropics—some species, it is true, nesting twice in the year, but not oftener.

The enemies of nesting-birds are not nearly so numerous in temperate as in tropical regions. In the former many species have few enemies except man, and therefore seek seclusion away from human habitations—often building rather conspicuous nests in high trees, or on the ground in swampy districts, in open plains where a good watch may be kept and ample warning given on the approach of man. In tropical regions the order of things is reversed: many large forest-frequenting species nesting in clearings and localities sufficiently frequented by man, in order to secure protection from still greater enemies. Doubtless the greatest enemies birds have in the tropics are monkeys, which are often abundant; while squirrels and huge tree-climbing monitor-lizards are also numerous. As all these enemies seldom leave the true forest, birds are able to rear their young with less risk in more open localities. During seven years spent in tropical islands I have never noticed a nest in the branches of a high tree in true forest. The larger Hawks prefer small patches of timber at some distance from the forest; and in the neglected clearings of the Dusans, round the base of Kina Balu, many forest-frequenting species were

found nesting, such as the Fruit-Pigeon (*Carpophaga badia*). The Cuckoo-Doves (*Macropygia emiliana* of Borneo and *M. tenuirostris* of the Philippines) nest in open localities in dead bracken only a foot or two above the ground, their plumage assimilating perfectly with the dead fern.

Large clearings in which the huge dead trunks of rotting forest-giants remain standing are the favourite breeding-places of many species. Some of these trunks are bored by Woodpeckers in dozens of places. In these old borings Parrots of the genera *Tanygnathus* and *Prioniturus* form nesting-colonies and rear their young in security; while, of the Starling tribe, *Sarcops* and *Calornis* may be noticed breeding in numbers in the same trees. *Calornis* is, however, very partial to dovecots, nesting in the boxes with domestic Pigeons. The Pigmy Falcon (*Microhierax*) I also noticed nesting high up in a hole in one of these dead trunks. The commonest eggs, perhaps, found in the East are those of the Bulbuls, *Pycnonotus* and *Iole*. These nests are generally on the edge of the forest or in some isolated bush in old clearings. The species which prefer to remain in the true forest for their nidification, such as Woodpeckers and Barbets, nest often in impregnable strongholds; while Hornbills, which are too large to enter a hole small enough to keep out their enemies, build the hen in with gums, and she has to remain thus imprisoned until the young one is able to fly. In the low growth in true forest we find numbers of birds nesting:—Flycatchers, among the masses of forest-drift which collect among the clumps of bamboo and in the low trees, or in the long dangling pieces of moss which hang from the trees; while the Green Broad-bill (*Calyptomena*) also utilizes these masses of moss, selecting a piece at the end of some slender bough in the undergrowth, and for greater security often over a pathway. Many of the small ground-frequenting Timeliines nest among the forest-refuse in thickets or bamboo-clumps. Their nests are generally loose balls of leaves, entered at the side, but more nests of many of this genus are built away from the forest in old overgrown clearings. The sea-coast is quite a favourite locality for

Nightjars. I have taken their eggs among the sea-drift just above high-water mark both in Borneo and the Philippines. The various Sun-birds or Nectariniidæ suspend their bag-shaped nests on single trees in open plains at no great distance from the ground, or in and about the native villages. *Æthopyga magnifica* of Negros nests in true forest, but the nests of this genus mimic so closely the hanging masses of dead leaves and other débris that they are most difficult to find. Everett's Spider-hunter (*Arachnothera everetti*) of Borneo stitches a neat cradle to the underside of some large leaf, generally one of the forest bananas, in open localities. The Tailor-birds (*Orthotomus*) often nest close to the ground near some frequented pathway; and I have found the elegant cup-like nest of the Little Blue-headed Flycatcher (*Rhipidura cyaneiceps*) on a dead bough which had fallen across a pathway in a most exposed position.

The bird-collector, however, seldom finds many nests, for unfortunately his very occupation is contrary to success; birds, as a rule, being shot at sight, as the forests are so thick and vast that the lengthened observation of a bird is next to impossible.

The two plates of eggs which illustrate this paper have been executed by Messrs. Pawson and Brailsford, of Sheffield.

1. *CORVUS PHILIPPINUS* (Bonap.). Philippine Crow.

A. Clutch of 3 eggs. Marinduque, May 1888. J. B. Steere.

Shape ovate. Ground-colour pale sea-green, thickly mottled all over, especially towards the larger end, with olive-brown; under-markings faint grey. Measurements 43 mm. × 28 mm.

The nest is a loosely-constructed platform of fibre, mixed with a few rootlets, &c.

2. *CORVUS PUSILLUS* Tweedd. Small Philippine Raven. (Plate VI. fig. 5.)

A. 1 egg taken from oviduct of female. Mindoro, June 1888. J. B. Steere.

Shape ovate, rather rounded towards the smaller end. Ground-colour pale greenish white, finely spotted and dotted

over the entire shell with greenish brown and pale lavender. Measurements 38 mm. \times 26 mm.

3. *ORIOLOUS CHINENSIS* Linn. Chinese Oriole.

A. Clutch of 3 eggs. Cape Engaño, North-east Luzon, 15th April, 1895. J. Whitehead.

Shape ovate. Pure white, with scattered spots and minute dots of deep blackish brown, and a few faint under-markings of slate-grey. Measurements 32 mm. \times 23 mm.

B. Clutch of 2 eggs. Fuga Island, Babuyan Group, North Luzon, 5th April, 1895. J. Whitehead.

Similar to the above. Measurements 33 mm. \times 22 mm.

The first nest was placed in a casuarina-tree on the sea-coast at some distance from the forest; the second was found in a high tree close to the freshly-made nest of the White-breasted Sea-Eagle (*Haliaëtus leucogaster*) from which the bird was disturbed.

Both nests were of the usual Oriole type.

C. Clutch of 4 eggs. Marinduque, 12th May, 1888. J. B. Steere.

Similar to the above. Measurements 31 mm. \times 23 mm.

4. *EDOLIISOMA CÆRULESCENS* Blyth. Luzon Cuckoo-Shrike. (Plate VI. fig. 3.)

A. 1 egg. Benguet District, North-west Luzon, 14th March, 1894. J. Whitehead.

Shape ovate. Ground-colour pale blue, spotted and dotted over the entire shell. Under-markings grey and greyish lilac; over-markings dark brown. Measurements 29 mm. \times 21 mm.

This egg was taken from the bird.

5. *ZEOCEPHUS RUFUS* (G. R. Gray). Chestnut Flycatcher. (Plate V. fig. 4.)

A. Clutch of 3 eggs. Cape Engaño, North-east Luzon, 24th April, 1895. J. Whitehead.

Shape ovate. Ground-colour pure white, with a decided zone of small blotches and spots round the pole of the larger end; upper-markings brown-lake, and under-markings lilac. Two of the eggs have small dots of the darker colour thinly

scattered over the whole shell, while in the third these markings are almost entirely confined to the zone. Measurements 22 mm. \times 16 mm.

Nest much like that built by *Hypothymis azurea*, and placed in similar positions, but within the brown lining is a second lining of fine black fibre taken from the base of the palm-leaves.

6. RHIPIDURA CYANEICEPS (Cassin). Blue-headed Fantailed Flycatcher.

A. Clutch of 2 eggs. Cape Engaño, North-east Luzon, 29th April, 1895. J. Whitehead.

Shape ovate. Ground-colour rich cream-colour. A zone of spots and small blotches round the larger end; the under-markings pale slate-grey, the over-markings darker cream-colour. Measurements 19 mm. \times 14 mm.

Nest of the usual cup-shaped type made by all the species of *Rhipidura*, and placed on a dead bough in an open pathway in a conspicuous position.

7. RHIPIDURA NIGRITORQUIS Vigors. Black-necked Fantailed Flycatcher.

A. Clutch of 2 eggs. Marinduque, 8th May, 1888. J. B. Steere.

Shape ovate. Ground-colour pale creamy white, with a rather wide zone round the middle composed of small blotches and spots of pale yellowish brown or lavender-grey; a few scattered spots of the same colours over the rest of the shell. Measurements 18 mm. \times 14 mm.

B. Clutch of 3 eggs. Marinduque, 12th May, 1888. J. B. Steere.

Similar to A, but the markings are rather smaller. Measurements 19 mm. \times 15 mm.

Eggs of this species are indistinguishable from those of *R. javanica*.

The two nests are of the usual cup-shaped type, constructed of tightly-woven fibre and wide dead grass bound together with spiders' webs, and neatly lined with fine grasses and black fibre.

8. RHINOMYIAS ALBIGULARIS Bourns & Worcester. White-throated Flycatcher. (Plate V. fig. 3.)

A. Clutch of 2 eggs. Base of Canloan Volcano, Central Negros, 31st March, 1896. J. Whitehead.

Shape short ovate, one much blunter at the small end than the other. Ground-colour very pale dull rufous, indistinctly mottled all over with darker shades of the same colour. In general appearance these eggs strongly resemble one type laid by the Common Robin. Measurements 23 mm. \times 17 mm.

The nest, composed of moss and lined with fine roots, was placed in a hole in an old rotten tree about six feet from the ground. The eggs were partially incubated, and the female was snared on the nest.

9. MUSCICAPULA SAMARENSIS Bourns & Worcester. Samar White-browed Flycatcher. (Plate VI. fig. 6.)

A. 2 fresh eggs. Near Paranos, Samar, 17th June, 1896. J. Whitehead.

Shape ovate. Ground-colour beautiful sea-green, speckled all over, especially towards the larger end, with pale brown, the over-markings being slightly darker and smaller. Measurements 19 mm. \times 13 mm.

The nest, a remarkably frail structure, was made of roots and lined with broad leaves. It was well concealed, being placed close to the ground in a heap of forest-drift near some rocks. The female bird was snared.

10. HYPOTHYMIS AZUREA (Bodd.). Black-naped Flycatcher.

A. Clutch of 2 eggs. Cape Engaño, North-east Luzon, 24th May, 1895. J. Whitehead.

Shape rounded ovate. Ground-colour pure white, thickly speckled, especially round the larger end, with small spots and dots of brown-lake and with a few pale lilac under-markings. In general character these eggs resemble those of the Tits (Paridæ). Measurements 17 mm. \times 14 mm.

Nest cup-shaped, generally placed in a forked branch among the lower growth in old forests. The structure is made of moss firmly bound together with white spiders'-web and lined with fine brown fibre.

11. *TURDUS NIGRORUM* Grant. Negros Blackbird. (Plate V. figs. 8 & 9.)

A. Clutch of 2 eggs, much incubated. Canloan Volcano, 6600 feet, Central Negros, 12th April, 1896. J. Whitehead.

Shape ovate. Ground-colour very pale green : one egg very thickly mottled with brick-red, almost hiding the ground-colour ; the second blotched towards the larger end and more thinly marked over the rest of the shell, showing the very pale red-lilac clouded under-markings. As compared with eggs of the Common Blackbird, the above are very much redder, and closely resemble those of *Turdus simillimus*.

On the 21st of April, 1896, a second nest was found containing two young birds, indicating that two eggs are probably a full clutch.

The nests were placed in a prickly creeping palm ("pandan" of the Malays) about 12 feet from the ground.

12. *IOLE MINDORENSIS* Steere. Mindoro Streaked Bulbul. (Plate V. fig. 2.)

A. Clutch of 2 eggs. Mindoro. J. B. Steere.

Shape ovate. Ground-colour pale pink, blotched with light red, spotted with dark reddish brown, and with numerous grey under-markings. Measurements 27 mm. \times 19 mm.

The nest is rather loosely constructed of dead leaves and fibre, and lined with dead wiry grass and fibre.

13. *IOLE PHILIPPENSIS* (Gmel.). Philippine Streaked Bulbul.

A. Clutch of 2 eggs, much incubated. Cape Engaño, North-east Luzon, 23rd May, 1895. J. Whitehead.

Shape ovate. Ground-colour pure white, thickly speckled all over with brown, lake, and pale violet under-markings. Measurements 29 mm. \times 20 mm.

The nest, which is constructed of fine roots, like that of other Bubluls, was placed in a bush in the vicinity of the forest.

14. *PYCNONOTUS GOIAVIER* (Scop.). Yellow-vented Bulbul.

A. Clutch of 2 eggs. Near Paranos, Samar, 24th June, 1896. J. Whitehead.

Shape ovate. Ground-colour pale pinkish white, very thickly mottled all over with light red and underlying greyish-lavender blotches. Measurements 21 mm. \times 15 mm.

Nest cup-shaped, built of fine roots, and placed in a low tree about 5 feet from the ground in an open situation.

B. Clutch of 3 eggs. Dumaguete, Negros, 11th February, 1888. J. B. Steere.

Less thickly mottled than clutch A. The ground-colour nearly white and more conspicuous, especially towards the smaller end, the pale lavender under-markings forming extensive blotches towards the larger end. Measurements 22 mm. \times 16 mm.

C. Clutch of 4 eggs. Marinduque, 12th May, 1888. J. B. Steere.

Shape blunt ovate. Two of the eggs resemble those of clutch A; the other two have the over-markings more blended and blotchy. Measurements 21 mm. \times 16 mm.

15. *CITROCINCLA LUZONIENSIS* (Kittl.). Philippine Shama. (Plate VI. fig. 4.)

A. Clutch of 2 eggs. Cape Engaño, North-east Luzon, 27th April, 1895. J. Whitehead.

Shape short ovate. Ground-colour pale sea-green, profusely spotted and blotched all over, especially towards the larger end, with reddish brown and with some indistinct lilac under-markings. Measurements 21 mm. \times 16 mm.

B. Clutch of 2 eggs. Cape Engaño, North-east Luzon, 26th May, 1895. J. Whitehead.

Rather more oval in shape than the above and more richly marked. Measurements 23 mm. \times 16 mm.

One nest was placed in the hollowed-out stem of a dead palm broken off by the wind, the other in a hollow stump close to the ground; in both cases the nest was composed of moss and dry grass.

16. *ORTHOTOMUS CHLORONOTUS* Grant. Green-backed Tailor-bird.

A. Clutch of 3 eggs. Province of Isabella, North-east Luzon, 29th May, 1894. J. Whitehead.

Shape ovate. Ground-colour pure white, thinly spotted and dotted all over with brown-lake over-markings and a few pale reddish-lilac under-markings. Measurements 16 mm. \times 13 mm.

The nest of the Green-backed Tailor-bird is of the ordinary type, being a pocket formed by two leaves sewn together. It was placed among the herbage by the side of a path about 8 inches from the ground.

On the 19th of May a second nest was found on a small islet in a stream where a few slender large-leaved plants were growing just above the water. This nest contained two young birds.

17. *MEGALURUS RUFICEPS* (Tweedd.). Rufous-headed Marsh-Warbler. (Plate V. fig. 7.)

A. Clutch of 3 eggs. Marinduque, 8th May, 1888. J. B. Steere.

Shape oval. Ground-colour very pale pinkish white, sparingly marked all over with small blotches and minute dots of light red and pale violet-grey under-markings, the latter forming a more or less distinct zone round the larger pole. Measurements 21 mm. \times 16 mm.

Nest of the Bulbul type, lined with fine wiry grasses and fibre.

18. *MACRONUS MINDANENSIS* Steere. Hairy-backed Babbler.

A. Clutch of 3 eggs. Near Paramos, Samar, 15th June, 1896. J. Whitehead.

Mr. Whitehead found a nest of this species containing three eggs. These were in such an advanced stage of incubation that the young birds hatched out a few hours after the eggs were placed in his room.

Eggs pure white, thickly speckled towards the larger end with dark red.

The nest, a large ball of bamboo-leaves and loosely constructed, was placed close to the ground in old forest.

19. *HYLOTERPE PHILIPPINENSIS* Walden. Yellow-bellied Thick-head. (Plate V. fig. 1.)

A. Clutch of 2 eggs (nearly hatching), 1 broken. Near Paranos, Samar, June 1896. J. Whitehead.

Shape ovate. Ground-colour brownish cream-colour, shading into a zone of deeper colour round the larger end; the zone is ornamented with spots of pale sienna-brown and larger underlying markings of bluish grey. Measurements 23 mm. \times 17 mm.

Nest cup-shaped, very similar to that constructed by *Iole philippensis*, and composed of similar materials—fine roots and dead leaves. It was situated in the undergrowth of old forest in a small tree about 10 feet from the ground, and the female bird was obtained.

20. *ÆTHOPYGA MAGNIFICA* Sharpe. Magnificent Sun-bird. (Plate V. figs. 5 & 6.)

A. Clutch of 2 eggs. Negros, February 1888. J. B. Steere.

B. Clutch of 3 eggs, hard set (1 broken). Base of Canloan Volcano, Negros, 23rd March, 1896. J. Whitehead.

Shape ovate. Ground-colour pale terra-cotta red, very thickly mottled all over with a darker tint of the same colour, the mottlings heaviest at the larger end, a few fine hair-like scribblings crossing the shell transversely. Measurements 17 mm. \times 12 mm.

C. Clutch of 2 fresh eggs (1 broken). Base of Canloan Volcano, Negros, 15th April, 1896. J. Whitehead.

Ground-colour as in the above, but the shell heavily clouded with rich dark terra-cotta and darker scribblings and specks of the same colour. Measurements 16 mm. \times 12 mm.

This Sun-bird nests in old forest. The nest is generally found suspended among forest débris in the vicinity of some huge trec-trunk only a few feet from the ground. It is well hidden by the undergrowth.

The nest is a well-woven bag-shaped structure, with a roofed entrance at the side. It is principally constructed of fine grass, rootlets, palm-fibre, and fragments of dead leaves woven together with spiders' webs and lined with fine dead grass-tops and seeds.

The nest found by Professor Steere was suspended from a root under the overhanging bank of a river, and looked like a tuft of rubbish left by high water.

21. *ÆTHIOPYGA BELLA* Tweedd. White-bellied Sun-bird.
(Plate V. fig. 10.)

A. Clutch of 3 fresh eggs. Near Paranos, Samar, 19th July, 1895. J. Whitehead.

Shape ovate. Ground-colour pale pinkish white, a heavily-marked irregular zone of dull red towards the larger end, and some scattered spots and blotches of the same colour over the rest of the shell, with here and there underlying brown markings. Measurements 14 mm. \times 10 mm.

The nest built by this Sun-bird differs considerably from that made by *Æ. magnifica*, being a long bag-shaped pocket, with a loose dangling tail of dead leaves. The entrance is at the side and roofed over, in fact very much like that constructed by the different species of *Cinnyris*. This nest was found dangling to a bramble in an old native clearing some distance from the forest. The female was obtained after much difficulty.

22. *EUDREPANIS PULCHERRIMA* (Sharpe). Short-tailed Yellow-rumped Sun-bird.

A. Clutch of 3 slightly incubated eggs. Near Paranos, Samar, 26th June, 1896. J. Whitehead.

Shape ovate. Ground-colour dull pink, rather thickly mottled all over with pinkish grey, especially towards the larger end, the markings forming a rather distinct zone round the pole. The over-markings are small rounded spots and dots of deep vandyke-brown. Measurements 15 mm. \times 12 mm.

Nest attached to the underside of a climbing fern about 8 feet from the ground.

23. *CINNYRIS JUGULARIS* Linn. Yellow-breasted Sunbird.

A. Clutch of 3 eggs. Marinduque, 17th May, 1888. J. B. Steere.

Shape ovate. Ground-colour whitish, partially obscured by the mottled grey under-markings, which cover the greater part of the shell; over-markings pale brown, with a few spots and irregular marks of a deep brown. Measurements 16 mm. \times 12 mm.

The nest is a neatly-woven pocket-shaped structure, with a roofed entrance at the side. It is composed of fibre, dead grasses, and other forest débris, bound together with spiders' webs, and lined with cotton and fine grass.

24. *DICÆUM HÆMATOSTICTUM* Sharpe. Blood-breasted Flower-pecker. (Plate VI. fig. 2.)

A. 1 egg, quite fresh. Base of Canloan Volcano, Central Negros, 19th March, 1896. J. Whitehead.

Shape ovate. Ground-colour very pale greenish white, profusely spotted towards the larger end with rather heavy clouded lilac under-markings and olive-brown specks, which are distributed sparingly over the rest of the shell. Measurements 17 mm. \times 12 mm.

The only nest found was suspended from the end of a branch some distance from the ground.

25. *DICÆUM CINEREIGULARE* Tweedd. Mindanao Orange-breasted Flower-pecker.

A. 2 eggs. Near Paranos, Samar, 20th July, 1895. J. Whitehead.

B. 2 eggs. Near Paranos, Samar, 26th July, 1895. J. Whitehead.

C. 2 eggs. Near Paranos, Samar, 30th July, 1896. J. Whitehead.

Shape rather long ovate. Pure white. Measurements 15 mm. \times 12 mm.

Nest round, pocket-shaped, with the entrance at the side, suspended from slender boughs or to the stem of a large leaf. The outside of the nest is made of green moss bound together

with spiders' webs, the inside lined with the dark brown down stripped from the young fern-fronds. A favourite site is a neglected native clearing some distance from the forest.

26. *LOXIA LUZONIENSIS* Grant. Philippine Crossbill.

In the end of December, 1893, Mr. Whitehead noticed a pair of these Crossbills with nesting materials in their bills. In the following January, while in the highlands of Benguet, he found a nest containing three eggs and situated at the end of a pine-branch. The slender branch overhung a steep slope, and it was found impossible to secure the eggs. Again, on Mount Data, towards the end of January 1895, after much trouble, a second nest was discovered near the top of a high pine-tree. This nest contained four young birds, two of which flew away before they could be secured.

27. *CALORNIS PANAYENSIS* (Scop.). Panay Glossy Starling. (Plate VI. fig. 1.)

A. Clutch of 3 eggs. Province of Isabella, North-east Luzon, 28th April, 1894. J. Whitehead.

Shape sharp ovate. Ground-colour beautiful sea-green, blotched and spotted towards the larger end with pale reddish lilac under-markings and sienna over-markings. Measurements 27 mm. \times 19 mm.

B. Clutch of 2 eggs. Province of Isabella, North-east Luzon, 28th April, 1894. J. Whitehead.

As above, but in one egg the markings are much fewer, and in the second they are reduced to small dots and specks, which are scattered over the greater part of the shell, though most numerous towards the larger end. Measurements 25 mm. \times 20 mm.

A colony of these Starlings was found nesting in a dovecot along with numbers of domestic Pigeons. The nests contained eggs and young of all ages. Three appeared to be the maximum number of eggs laid by one bird.

28. *ALAUDA GULGULA* Frankl. Chinese Skylark.

A. Clutch of 3 eggs. Province of Isabella, North-east Luzon, 25th May, 1894. J. Whitehead.

Shape ovate. Ground-colour very pale greenish white,

variously mottled and spotted with pale french-grey under-markings and brown upper-markings. In one egg the markings are chiefly concentrated into a zone round the middle of the shell; in the other two they are pretty equally scattered over the whole shell. Measurements 21 mm. \times 16 mm.

B. Clutch of 2 eggs. Province of Isabella, North-east Luzon, 25th May, 1894. J. Whitehead.

Much like the above and equally spotted all over, but the over-markings are of a more yellowish brown. Measurements 22 mm. \times 15 mm.

This Lark was nesting in an open bit of country thinly covered with tufts of grass, beneath which the nests were concealed. Fully-fledged young birds of this species were also observed on the same date.

29. *MUNIA JAGORI* Cab. Little Chestnut Weaver.

A. Clutch of 5 eggs. Philippine Is. J. B. Steere.

Eggs ovate. Pure white. Measurements 16 mm. \times 11 mm.

Nest large, loosely constructed of broad grasses and strips of bamboo-leaf and lined with dead grass-tops.

30. *PITTA ATRICAPILLA* Less. Philippine Black-headed Pitta.

A. Clutch of 2 eggs (1 accidentally broken). Near Paranos, Samar, 30th June, 1896. J. Whitehead.

Shape rounded ovate. Ground-colour pure white, thickly speckled all over with brown and larger underlying spots of french-grey, the latter being most numerous round the larger pole. Measurements 26 mm. \times 21 mm.

The nest with two slightly incubated eggs (one of which was broken) were brought by a native, together with the parent birds. The somewhat bulky nest was composed outwardly of twigs and lined with moss.

31. *CAPRIMULGUS GRISEATUS* G. R. Gray. Gray's Philippine Nightjar. (Plate VI. fig. 7.)

A. Clutch of 2 eggs. Cape Engaño, North-east Luzon, 26th May, 1895. J. Whitehead.

Shape elliptical oval. Ground-colour pale creamy white, with very pale lavender-grey under-markings and very pale brownish over-markings. The blotches and markings, none of which are very large, are unevenly distributed over the whole surface. Measurements 31 mm. \times 22 mm.

The eggs were placed on the sand just above high-water mark among sea-drift, which, in this instance, consisted of huge tree-trunks. Both birds were seen and identified beyond doubt.

32. *CAPRIMULGUS MANILLENSIS* G. R. Gray. Manila Nightjar.

A. Clutch of 2 eggs. Cape Engaño, North-east Luzon, 22nd May, 1895. J. Whitehead.

Shape elliptical oval. Ground-colour pale cream, under-markings pale lavender-grey, irregularly blotched over-markings pale brown, but darker than in *C. griseatus*. In one egg the over-markings are almost wanting, being reduced to one or two blotches. Measurements 29 mm. \times 22 mm.

Also found nesting on the sea-coast outside the forest limit.

33. *GEOPELIA STRIATA* (Linn.). Barred Ground-Dove.

A. Clutch of 2 eggs. Cape Engaño, North-east Luzon, 3rd May, 1895. J. Whitehead.

B. Clutch of 2 eggs. Cape Engaño, North-east Luzon, 5th May, 1895. J. Whitehead.

Shape perfect oval. Pure glossy white. Measurements 27 mm. \times 21 mm.

This species nests in the lower growth of old forests, the frail nest of twigs being often placed among the hanging creepers. Generally two eggs are laid.

34. *GALLINULA CHLOROPUS* Linn. Moorhen.

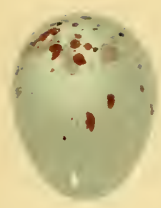
A. Clutch of 4 eggs, much incubated. Samar, 25th August, 1896. J. Whitehead.

The eggs are perfectly similar to those laid by European Moorhens, but the number of eggs in the clutch, as well as their relatively smaller size, is noteworthy. Measurements 42 mm. \times 39 mm.



Swain & Kraatz del.

EGGS OF PHILIPPINE BIRDS.



1



2



3



4



5



6



7



8

JOHNSON & BEAL, ARTISTS, HARFORD.

EGGS OF PHILIPPINE BIRDS.

35. *AMAURORNIS OLIVACEA* (Meyen). Philippine Crane.
A. 2 eggs. Siquijor, February 1888. J. B. Steere.

Shape ovate. Ground-colour pale creamy white, with small blotches and spots of reddish brown, purplish lavender, and pale grey scattered thiuly over the entire shell. Measurements 40 mm. × 30 mm.

36. *ÆGIALITIS PERONI* (S. Müller). Malay Sand-Plover.
(Plate VI. fig. 8.)

A. Clutch of 3 eggs. Cape Engaño, North-east Luzon, 26th May, 1895. J. Whitehead.

Shape short ovate. Ground-colour pale cream ; the whole shell with small blotches, streaks, and zigzag pencillings of rich sepia and pale lavender. Measurements 30 mm. × 22 mm.

The three eggs were deposited on the bare sand among sea-drift and only a few yards above high-water mark. The female was shot. On the same day young Plovers nearly ready to fly were captured.

EXPLANATION OF THE PLATES.

PLATE V.

- Fig. 1. *Hyloterpe philippinensis*, p. 241.
2. *Iole mindorensis*, p. 238.
3. *Rhinomyias albigularis*, p. 237.
4. *Zeocephus rufus*, p. 235.
5, 6. *Æthopyga magnifica*, p. 241.
7. *Megalurus ruficeps*, p. 240.
8, 9. *Turdus nigrorum*, p. 238.
10. *Æthopyga bella*, p. 242.

PLATE VI.

- Fig. 1. *Calornis panayensis*, p. 244.
2. *Dicaeum hæmatostictum*, p. 243
3. *Edoliisoma cærulescens*, p. 235.
4. *Cittocincla luzoniensis*, p. 239.
5. *Corvus pusillus*, p. 234.
6. *Muscicapula samarensis*, p. 237
7. *Caprimulgus griseatus*, p. 245.
8. *Ægialitis peroni*, p. 247.